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**TRANSMITTAL LETTER**  
**(General - Patent Pending)**

Docket No.  
**DRE0167US.NP**

In the Application of: **Yellen and Friedman**

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
10/585,161	Not yet assigned	Not yet assigned	26259		

Title: **Programmable Self-Aligning Liquid Magnetic Nanoparticle Masks and Methods for Their Use**

COMMISSIONER FOR PATENTS:

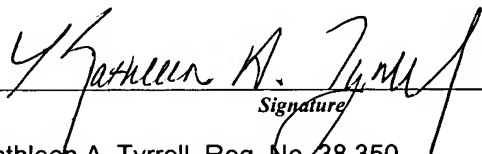
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in the above identified application.

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Signature  
Kathleen A. Tyrrell, Reg. No. 38,350

Dated: August 9, 2006

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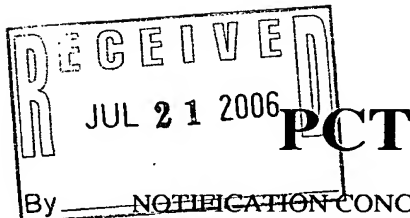
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## PATENT COOPERATION TREATY

PCT/US2004/043620



From the INTERNATIONAL BUREAU

To:

LICATA, Jane, Massey  
Licata & Tyrrel PC  
66 E. Main Street  
Marlton, NJ 08053  
ETATS-UNIS D'AMERIQUE

By            NOTIFICATION CONCERNING  
TRANSMITTAL OF COPY OF INTERNATIONAL  
PRELIMINARY REPORT ON PATENTABILITY  
(CHAPTER I OF THE PATENT COOPERATION  
TREATY)

(PCT Rule 44bis.1(c))

Date of mailing (day/month/year)  
13 July 2006 (13.07.2006)

Applicant's or agent's file reference  
DRE-0167

## IMPORTANT NOTICE

International application No.  
PCT/US2004/043620

International filing date (day/month/year)  
29 December 2004 (29.12.2004)

Priority date (day/month/year)  
30 December 2003 (30.12.2003)

Applicant

DREXEL UNIVERSITY et al

The International Bureau transmits herewith a copy of the international preliminary report on patentability (Chapter I of the Patent Cooperation Treaty)

The International Bureau of WIPO  
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# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference DRE-0167	<b>FOR FURTHER ACTION</b>	See item 4 below
International application No. PCT/US2004/043620	International filing date ( <i>day/month/year</i> ) 29 December 2004 (29.12.2004)	Priority date ( <i>day/month/year</i> ) 30 December 2003 (30.12.2003)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant DREXEL UNIVERSITY		

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 *bis*.1(a).
2. This REPORT consists of a total of 4 sheets, including this cover sheet.  
  
In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

- |                                     |              |   |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I    | Basis of the report   |
| <input type="checkbox"/>            | Box No. II   | Priority  |
| <input type="checkbox"/>            | Box No. III  | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  |
| <input type="checkbox"/>            | Box No. IV   | Lack of unity of invention  |
| <input checked="" type="checkbox"/> | Box No. V    | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/>            | Box No. VI   | Certain documents cited   |
| <input type="checkbox"/>            | Box No. VII  | Certain defects in the international application  |
| <input type="checkbox"/>            | Box No. VIII | Certain observations on the international application   |

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland  Facsimile No. +41 22 338 82 70	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Date of issuance of this report 03 July 2006 (03.07.2006)</td> </tr> <tr> <td style="padding: 2px;">Authorized officer  Simin Baharlou  e-mail: pt09@wipo.int</td> </tr> </table>	Date of issuance of this report 03 July 2006 (03.07.2006)	Authorized officer  Simin Baharlou  e-mail: pt09@wipo.int
Date of issuance of this report 03 July 2006 (03.07.2006)			
Authorized officer  Simin Baharlou  e-mail: pt09@wipo.int			

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US04/43620

**Box No. I Basis of this opinion**

1. With regard to the language, this opinion has been established on the basis of:

- ☐ the international application in the language in which it was filed
- ☐ a translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

- ☐ a sequence listing
- ☐ table(s) related to the sequence listing

b. format of material

- ☐ on paper
- ☐ in electronic form

c. time of filing/furnishing

- ☐ contained in the international application as filed.
- ☐ filed together with the international application in electronic form.
- ☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.  
PCT/US04/43620

Box No. V Reasoned statement under Rule 43 bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims <u>NONE</u>	YES
	Claims <u>1-8</u>	NO
Inventive step (IS)	Claims <u>1-4 and 8</u>	YES
	Claims <u>5-7</u>	NO
Industrial applicability (IA)	Claims <u>1-8</u>	YES
	Claims <u>NONE</u>	NO

2. Citations and explanations:

Claims 1-8 lack novelty under PCT Article 33(2) as being anticipated by Chen et al. (2004/0150865).  
Chen et al. teach the claimed invention including a method of fabricating a programmable mask, wherein the mask comprises a plurality of optical modulators arranged in an array, said plurality of optical modulators each including at least one nano-particle; and a control arrangement operatively coupled to said optical modulators, said control arrangement applying a stimulus to said nano-particles to thereby cause said nano-particles to change optical properties.

Claims 5-7 lack an inventive step under PCT Article 33(3) as being obvious over Chen et al. (2004/0150865).  
Chen et al. teach the claimed invention including a method of fabricating a programmable mask, wherein the mask comprises a plurality of optical modulators arranged in an array, said plurality of optical modulators each including at least one nano-particle; and a control arrangement operatively coupled to said optical modulators, said control arrangement applying a stimulus to said nano-particles to thereby cause said nano-particles to change optical properties.  
Chen et al. does not teach that the use of magnetic bits embedded in the substrate as recited in claims 5-7.  
However, the use of magnetic particles on the surface or embedded within the surface would be considered obvious variations of the same technique.

Claims 1-8 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.